



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/672,793  | 09/29/2000  | Daniel M. Barich     | 47440-027           | 8604             |
| 7590  | 08/06/2004  |                      | EXAMINER            |                  |
| McDermott Will & Emery<br>600 13th Street NW<br>Washington, DC 20005-3096 |             |                      | GARBER, CHARLES D   |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2856                |                  |

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

mv

**Office Action Summary**

**Application No.**

09/672,793

**Applicant(s)**

BARICH ET AL.

**Examiner**

Charles D. Garber

**Art Unit**

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-17 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-14,17 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: There is no antecedent basis for the term "said exhaustive list" in line 10 of the claim. Appropriate correction is required.

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Two new claims have both been numbered 21. The second occurrence of claim 21 is misnumbered.

Misnumbered claim 21 been renumbered 22.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Admission) in view of 49 CFR § 180.517, AAR Rule 80 and Cornett et al. (US Patent 5,216,612).

Regarding claims 1 and 17, Admission discloses federal regulations require owners or operators to inspect tank cars that fall under the regulations intended for inspection in accordance with 49 CFR § 180.509 and Rule 88.B.2. (see pages 1-6 of the Specification). This is considered equivalent to a method selecting for inspection one of a regulated and a non-regulated tank car (in this case the alternative of a regulated tank car as in the instant invention).

It should be noted that this limitation was presented in alternative form and does not require a prior art teaching of selection for inspection ***both of or one each of*** [emphasis added] a regulated and a non-regulated car.

Admission here also discloses that the cited regulations set forth details about the locations (sites) and types of inspections that are to be carried out in accordance with both sets of regulations, which Examiner considers to be instructions in the same sense as the instant invention. Regulations inherently require that those mandated to

comply with the regulations select those instructions that apply and carry them out accordingly. Those written instructions that apply collectively are considered to be a listing of sites in the same sense as the instant invention and Examiner considers the mandated compliance with them to be equivalent to selecting from an instruction set comprising inspection sites covered by the aforementioned regulations a comprehensive list of sites to be inspection for the selected regulated tank car as in the instant invention alternative.

Once again, it should be noted that this limitation as it applies to “regulated tank car or non-regulated tank car” was presented in the alternative form and does not require a prior art teaching of selecting a list of sites for both of or one each of a regulated and a non-regulated car.

Both sets of regulations discussed above also require compliance with the instructions set forth within and therefore the regulations collectively require “inspecting each of the listed sites in accord with the instruction set forth for each of the listed sites in the instruction set” as in the instant invention.

Though Admission does not expressly recite “recording data derived from implementation of the inspections conducted at each of” the “exhaustive list of sites”, 49 CFR § 180.517 teaches recording the results of inspection carried out in accordance with 49 CFR § 180.509 and AAR Rule 80 teaches Rule 88.B.2 inspection results be recorded on the car itself on both sides in stenciled letters. This is done because inspection are required repeatedly at specific intervals and the record provides an

indication to operators as to when the inspection must once again be carried out. This rule is dated to no later than January 1, 1996.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to record the results of inspections in accordance with 49 CFR § 180.509 because this is required by law and non-compliance carries costly penalties. It would have been obvious to one having ordinary skill in the art at the time the invention was made record the results of rule 88.B.2 inspections so that operators will have a clear indication when the next inspection is required.

The limitation reciting “wherein said comprehensive list of sites to be inspected comprises a plurality of inspection sites selected from at least two of 49 CFR § 180.509 stub sill inspection program and Rule 88.B.2.” appears to be substantively to be a repeat of the second claim limitation as discussed above. The second limitation refers to inspection sites in the plural within both 49 CFR § 180.509 stub sill inspection program and Rule 88.B.2. in combination rather than the alternative.

Regarding Applicant’s use the terms “comprehensive” (which means so large in scope or content as to include much) and “exhaustive” (which means treating all parts or aspects without omission) interchangeably to describe the list of inspection sites, both terms are rather subjective and unnecessary in the context of tank car inspections required by Federal regulation or adopted by voluntary choice. Examiner will treat both terms as superfluous expressions of unnecessary (in the case of Federally mandated inspections) or inexact (in the case of voluntarily adopted inspections) degree.

Admission does not teach aligning various inspection requirements.

Cornett teaches grouping maintenance activities in order to minimize lost production time (abstract and column 17 line 64 to column 20 line 25, figure 7C especially block 87). This involves rescheduling maintenance events that occur in close proximity in order to minimize lost time. Planned maintenance activities may be time dependent, such as inspections (column 10 lines 42-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to group or align inspection in order to minimize lost production time.

Claims 4-14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Admission) as modified by 49 CFR § 180.517, AAR Rule 80 and Cornett et al. (US Patent 5,216,612) and applied to preceding claims above and further in view of 49 CFR 180.509.

Regarding claim 4, though the references do not expressly teach a visual inspection of the tank shell interior and exterior; piping, valves, fittings and gaskets; brake rigging, safety appliances, draft system, valves and fittings; closures and protective housings on the tank car; and all required markings on the tank car, 49 CFR 180.509 (hereinafter referred to as "Regulation") requires those responsible for maintaining tank cars to ensure continuing qualification and re-inspection of the tank shell interior and exterior; piping, valves, fittings and gaskets, safety appliances, valves and fittings; closures and protective housings on the tank car; and all required markings on the tank car. Though the Regulation does not specifically address brake rigging and draft system for continuing qualification the Regulation does include the broad

Art Unit: 2856

requirement to include any system or element that may effect safety and one skilled in the art would have known that faulty brakes or draft system would impair safety.

As for claims 5, Regulation also requires visual inspection of all fillet welds. Though the Regulation does not expressly recite that inspection is required of welds that are greater than 1/4" and within 4 feet of a bottom longitudinal centerline of the tank car one of ordinary skill in the art would have known where and of what types are at greatest risk of failure.

As for claim 6, Regulation requires the pressure leak testing of all piping in a tank car which obviously includes any heating coils that may be found within the tank car.

As for claim 7, Regulation requires ultrasonic flaw detection on all circumferential butt welds of the tank shell at least within two feet of a bottom longitudinal centerline of the tank car.

As for claim 8, Regulation requires thickness examination of at least one of the tank shell, heads, sumps, and nozzles for each of at least one compartment. Though regulation is not specific about what type of technique should be used to determine material thickness, ultrasonic thickness (UT) determination is perhaps the most widely known method where access to both sides with a single instrument is not possible and one of ordinary skill would have known to use UT for this purpose. Regulation also does not expressly teach measuring the thickness of manways, however one of ordinary skill would have known that loss of thickness due to corrosion of manway material would jeopardize the safety of anyone walking the manways and that an inspection of the



thickness would be in order in view of the Regulation requirement to inspect any element of safety on a tank car.

As for claim 9, Regulation requires inspection of at least one of the thermal protection systems, tank head puncture resistance systems, coupler vertical restraint systems, and systems used to protect discontinuities to ensure integrity. Though the Regulation does not recite which inspection technique should be used, one of ordinary skill at the time the invention was made would have known that visual inspection is the simplest, requiring no specialized equipment but for perhaps a magnifying lens.

As for claim 10, Regulation requires testing the pressure relief device with air to ensure conformance with start-to-discharge pressure requirements. Regulation also requires removing the pressure relief device from the tank car and inspecting for proper thickness. Improper thickness is an indication of corrosion damage. Though regulation is not specific about the use of visual inspection as the inspection method of choice, visual inspection is advantageous for reasons previously stated.

As for claim 11, Regulation requires inspecting the lining if any.

As for claim 12, Regulation requires performing a leakage pressure test of any compartment of a tank and all fittings and openings corresponding to the compartment.

As for claims 13, 14 and 20, Regulation requires inspection of any welds for defects and damage. One of ordinary skill would have known this includes the various types of welds enumerated in the instant invention.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Admission) as modified by 49 CFR § 180.517, AAR Rule 80 and

Cornett et al. (US Patent 5,216,612) and applied to preceding claims above and further in view of McCasland (US Patent 5,856,931).

Claims 21 and 22 are substantively the same as claims 1 and 17 except that the method is applied only to non-regulated tank cars rather than to regulated and non-regulated tank cars in the alternative.

Admission explains that the regulations, including 49 CFR § 180.509 stub sill inspection program and Rule 88.B.2 requirements, are intended to “improve the level of safety and security with which hazardous materials can be transported from one place to another”. Safety and security are potentially at risk as a consequence of a structural failure that may release the hazardous materials into the environment with known unfortunate effects. Thus, the mandated inspections are intended initially to prevent premature structural failure from repeated or prolonged usage of the structural item. (If one could predict structural failure without inspection then failure would not be considered premature.) McCasland teaches that the prevention of “premature failure” through inspection may “reduce overall operating cost” (column 2 lines 60-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to inspect with inspections known to prevent premature failure (e.g. 49 CFR § 180.509 stub sill inspection program and Rule 88.B.2) in order to reduce overall operating cost.

***Allowable Subject Matter***

Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Please see Examiner's earlier Office Action for reasons for indicating allowable material.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (571) 272-2194. The examiner can normally be reached on 6:30 a.m. to 3:00 p.m..

Art Unit: 2856

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdg

A handwritten signature in black ink, appearing to be 'CDL' with a stylized flourish at the end.